Measuring Redistributive Preferences Implicit in Tax Policy: A Simulation Approach

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28th February 2026

Abstract

Redistributive tax-transfer systems embody implicit normative judgments about how society values additional consumption across income groups. This paper quantifies the marginal social welfare weights embedded in the German tax-benefit system by inverting an optimal tax model using a simulation-based structural labor supply framework. Departing from sufficient-statistics approaches that impose restrictive assumptions on behavioral responses, we implement a flexible microsimulation model that captures joint labor supply decisions of couples, intensive and extensive margins, discrete labor supply jumps, and income effects.

Using SOEP data, we simulate marginal, income-targeted reforms to the existing tax-transfer schedule and compute the associated Marginal Value of Public Funds (MVPF). Under inverse-optimal logic, the welfare weight for a given income group equals the inverse of the MVPF of redistributing one additional euro to that group. This approach remains valid even if the current system is not globally optimal and enables identification of locally Pareto-improving reforms.

Our findings reveal that the German system is consistent with welfare weights that value one additional euro for households in the bottom decile at roughly three times the value of one euro at the median. While welfare weights generally decline with income, they are not strictly monotonic. Importantly, substantial heterogeneity emerges across household types. At low to middle income levels, couples receive markedly higher implied welfare weights than singles. This pattern arises because tax reductions targeted at these income levels induce sizeable labor supply reductions

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among higher-income couples, particularly through secondary earners—behavioral margins absent or restricted in canonical sufficient-statistics models.

Comparisons with the standard Saez (2002) framework demonstrate that commonly imposed restrictions on labor supply responses materially alter the inferred distributional preferences, especially regarding couples versus singles. Our results highlight the importance of explicitly modeling joint labor supply and non-convex budget constraints when conducting inverse optimal tax analysis.

JEL: H21; H31; J22

Keywords: Inverse Optimum, Microsimulation, Marginal Value of Public Funds, Social Welfare Function, Optimal Taxation, Labor Supply, Efficiency